To: Marcus, Felicia@Waterboards[Felicia.Marcus@waterboards.ca.gov]
From: Vendlinski, Tim
Sent: Tue 11/17/2015 11:43:55 PM
Subject: Engaging/challenging scientists to provide information useful to decision-makers (and how we did so in the 1990s)

From: Vendlinski, Tim
Sent: Tuesday, November 17, 2015 3:42 PM
To: Ravazzini, Taryn@DeltaCouncil <Taryn.Ravazzini@deltacouncil.ca.gov>; 'mchotkowski@usgs.gov' <mchotkowski@usgs.gov>
Cc: 'cliff.dahm@deltacouncil.ca.gov' <cliff.dahm@deltacouncil.ca.gov>; rainer.hoenicke@deltacouncil.ca.gov
Subject: Engaging/challenging scientists to provide information useful to decision-makers (and how we did so in the 1990s)

Yesterday at the DPIIC meeting, several agency leaders stressed the need for more science, but I kept wondering to myself: to what end?

And during the meeting, when I called on the agencies to challenge the science community to generate recommendations that would be useful to decision-makers, Mike expressed concern about the notion of getting scientists mixed up in formulating recommendations to policy-makers. During the break, Taryn asked me to more clearly articulate what I meant by engaging scientists in the decision-making process, and how the DSC might pursue this task, so I'm writing this email message in an effort to clarify and embellish my points.

Without engaging the scientific community and collaborating with them to direct their research and studies, we're spending a lot of time and money generating science that may prove to be irrelevant to interagency decision-making (and the goals of the CWA, ESA, etc.), and meaningless when it comes to safeguarding beneficial uses.

The conundrums faced today by policy makers around fishes, flows, predation, contaminants, etc. echo what we faced in the late 80s and early 90s. There was a general agreement that freshwater diversions were adversely affecting fish populations, but nobody knew what volume and frequency of flows were needed to curb and/or reverse the decline of fisheries.

At the San Francisco Estuary Project, I was named the staff lead for the Flows Subcommittee, and set about organizing a series of technical workshops to see if the scientific community could reach consensus on the contentious issue of flows and fishes and report their findings back to policy makers. I was afforded an ample budget and I leveraged it to hire/recruit a group of world-renowned scientists to study the fishes & flows issue.

Dr. J.R. Schubel facilitated a series of three workshops between 1991-1993, and important new writings were contributed by Drs. Collins, Jassby, Kimmerer, Koseff, and Monismith to fill key technical gaps. And USGS was seriously involved, particularly with important guidance and contributions from Drs., Cloern, Nichols, and Smith).

The resulting report was released in 1993 entitled *Managing Freshwater Discharge to the San Francisco Bay/Sacramento-San Joaquin Delta Estuary: The Scientific Basis for an Estuarine Standard.*

http://www2.epa.gov/sfbay-delta/sfep-managing-freshwater-discharge-san-francisco-baysacramento-san-joaquin-delta-estuary

The findings of the workshop were later published in Ecological Applications, and EPA used these findings as a basis for the X2 salinity standard promulgated under the Bay Delta Accord of 1994.

It remains the prevailing salinity standard to this day.

http://www.esajournals.org/doi/abs/10.2307/1942069

http://articles.latimes.com/1994-12-16/news/mn-9560_1_delta-water

In 1998, a workshop was held to assess and review the X2 salinity standard, and Dr. Monismith contributed the following piece to the IEP newsletter (scroll down to find *X2 Workshop Notes*).

http://www.water.ca.gov/iep/newsletters/1998/IEP-fall-1998.cfm

In March 2012, EPA and the Aquatic Sciences Center convened a one-day workshop on the "low salinity zone" in an effort to collect and review the 23 most important journal articles on hydrodynamics, primary productivity, fisheries, etc. written since 1995. Results of the workshop were limited, but the framework of the workshop was sound, and the collection of scientific

papers could provide DSC with a useful platform or starting point if it wishes to engage the scientific community in a similar effort in the service of the State Water Board's comprehensive update of the Bay Delta WQCP.

http://www2.epa.gov/sites/production/files/documents/lsz-workshop-summary.pdf

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